



Highway Repairs Designed to Avoid Future Damage

Full Mitigation Best Practice Story

Sullivan County, New York

Albany, NY - Repairs to town highways damaged when Tropical Depression Ivan pounded Sullivan County during September 2004, have been designed to make the roads better able to absorb severe weather in the future.

Heavy rains during the storm caused flooding that washed out roads, eroded shoulders and compromised ditches in the Salak subdivision in the Town of Lumberland. The approved repair project looked beyond restoration to avoiding future destruction.



President Bush declared Sullivan County and 13 other New York counties major disaster areas as a result of Tropical Depression Ivan.

Among the recovery programs activated by the declaration was the Public Assistance Program. This program reimburses eligible government jurisdictions and certain non profits for costs for debris removal, emergency protective measures and the repair or restoration of damaged public infrastructure.

The Federal Emergency Management Agency (FEMA) provides 75 percent of the grant funding. The 25 percent non-federal share is made up from state and local funding. The New York State Emergency Management Office (SEMO) administers the program.

In most cases, public assistance repair and restoration funding brings the damaged infrastructure back to pre-disaster conditions.

However, a major FEMA and SEMO policy goal is to mitigate, where it is cost effective, when restoring damaged infrastructure so the repaired facility is better able to withstand future disaster damage. A little extra money spent now may save untold funds later.

Part of the reason for the Town of Lumberland road damage was that culverts, designed to channel water under the roads, were too small to handle the flooding. The water flow overwhelmed the culverts, causing water to run over the road and scour out the road surfaces. The mitigation solution was to put in larger culverts – three 15-inch pipes and two 18-inch pipes.

The extra mitigation feature work amounted to about \$10,000 of the total \$135,000 cost, with the federal share at about \$101,000.

“Our goal, by spending the funds to mitigate this situation, is to avoid costs of \$100,000 and more to repave the roads if another flood of these dimensions occurs,” said FEMA Federal Coordinating Officer Marianne C. Jackson.

In all, more than \$14 million was obligated under the PA program for Tropical Depression Ivan reimbursements for the State of New York. Of that, about \$1.2 million was mitigation funding associated with \$9.4 million in projects.

FEMA prepares the nation for all hazards and manages Federal response and recovery efforts following an incident of national significance. FEMA also initiates mitigation activities, trains first responders, works with state and local emergency managers and manages the National Flood Insurance Program and the U.S. Fire Administration. FEMA became part of the U.S. Department of Homeland Security March 1, 2003.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region II**

State: **New York**

County: **Sullivan County**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Flood Control**

Structure Type: **Concrete, Reinforced**

Activity/Project Start Date: **10/2004**

Activity/Project End Date: **07/2005**

Funding Source: **Other FEMA funds/ US Department of Homeland Security**

Funding Recipient: **Local Government**

Funding Recipient Name: **Town of Lumberland**

Activity/Project Economic Analysis

Cost: **\$135,000.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **1565 , 10/01/2004**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2005**

Repetitive Loss Property? **Yes**

Reference URLs

Reference URL 1: **<http://www.floodsmart.gov/>**

Reference URL 2: **<http://www.semo.state.ny.us/index.cfm>**

Main Points

- Repairs to town highways damaged when Tropical Depression Ivan pounded Sullivan County during September 2004, have been designed to make the roads better able to absorb severe weather in the future.
- Among the recovery programs activated by the declaration was the Public Assistance Program. This program reimburses eligible government jurisdictions and certain non profits for costs for debris removal, emergency protective measures and the repair or restoration of damaged public infrastructure.
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